

CLAIMS

What is claimed is:

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5 B1 1. A method for reducing or eliminating wetstacking in internal combustion engine systems
operating substantially under capacity, the method comprising the steps of:
establishing an exhaust temperature minimum set point;
monitoring exhaust temperature of an engine; and
restricting air intake into the engine when the temperature is below the set point.

10 2. The method of claim 1 additionally comprising the step of heating intake air when the
exhaust temperature is below the set point.

15 3. The method of claim 2 additionally comprising the step of dividing intake air into first and
second paths, the first path operated on by the restricting step and the second path operated on by the
heating step, wherein the second path comprises a fixed flow choke.

20 4. The method of claim 1 wherein the restricting step employs a proportional controller to
regulate amount of restriction.

25 5. The method of claim 1 wherein the restricting step comprises restricting air intake into the
engine via a valve upstream of an intake manifold of the engine.

6. The method of claim 5 wherein the restricting step comprises restricting air intake into the
25 engine via a butterfly valve upstream of an intake manifold of the engine.

7. The method of claim 5 wherein the restricting step comprises restricting air intake into the engine via a valve upstream of an intake manifold of the engine, wherein the valve does not eliminate air intake even when fully closed.

5 8. A method for reducing or eliminating wetstacking in internal combustion engine systems
operating substantially under capacity, the method comprising the steps of:
monitoring an operational parameter of an engine; and
based on the parameter, restricting air intake into the engine via a valve
upstream of an intake manifold of the engine.

9. The method of claim 8 wherein the monitoring step comprises monitoring exhaust
temperature of the engine and the restricting step is employed when the temperature is below a set
point.

10. The method of claim 8 additionally comprising the step of heating intake air when the
restricting step is operating.

11. An apparatus for reducing or eliminating wetstacking in internal combustion engine
systems operating substantially under capacity, said apparatus comprising:
means for monitoring exhaust temperature of an engine; and
means for restricting air intake into the engine when the temperature is below an
exhaust temperature minimum set point.

12. The apparatus of claim 11 additionally comprising means for heating intake air when the
exhaust temperature is below the set point.

13. The apparatus of claim 12 additionally comprising means for dividing intake air into first and second paths, the first path operated on by the restricting means and the second path operated on by the heating means, wherein the second path comprises a fixed flow choke.

5 14. The apparatus of claim 11 wherein the restricting means comprises a proportional controller to regulate amount of restriction.

10 15. The apparatus of claim 11 wherein the restricting means comprises means for restricting air intake into the engine via a valve upstream of an intake manifold of the engine.

16. The apparatus of claim 15 wherein the restricting means comprises means for restricting air intake into the engine via a butterfly valve upstream of an intake manifold of the engine.

17. The apparatus of claim 15 wherein the restricting means comprises means for restricting air intake into the engine via a valve upstream of an intake manifold of the engine, wherein the valve does not eliminate air intake even when fully closed.

18. An apparatus for reducing or eliminating wetstacking in internal combustion engine systems operating substantially under capacity, said apparatus comprising:

20 means for monitoring an operational parameter of an engine; and
means for restricting air intake into the engine based on the parameter via a valve upstream of an intake manifold of the engine.

25 19. The apparatus of claim 18 wherein the monitoring means comprises means for monitoring exhaust temperature of the engine and the restricting means operates when the temperature is below a set point.

20. The apparatus of claim 18 additionally comprising means for heating intake air when the restricting means is operating.

九月九日望蜀王